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REMARKS
ON THE
EPIDEMIC FEVER
AS IT WAS OBSERVÉD IN DUBLIN,
DURING
1847 AND 1848,

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DURING my attendance in the Whitworth and Hardwicke Hospitals of this city as clinical clerk to Dr. Banks, I kept daily registers of every case of fever that came under my care in the Hardwicke Hospital; and as I had charge of a large number of beds during the prevalence of the late Epidemic, from May, 1847, to May, 1848, when every ward in the hospital was crowded, and additional temporary sheds erected to afford more accommodation, I gathered a number of isolated observations on fever in general, and the Epidemic particularly attracted my attention. It further caused me to observe its character, as I suffered from its effects in the month of August, 1847, and on my recovery I recorded it with my other remarks in my note book. There they would have remained if my attention was not directed to a highly interesting paper by Dr. Patterson, in the *Edinburgh Medical and Surgical Journal*, for October last. He appears to have observed this very interesting Epidemic with great care, and to have recorded every fact connected with it that fell under his notice most impartially. His history of it is contained in the two first pages of his report, but as I believe it will be for the benefit of medical science to have

the fact clearly shown that the epidemic fever of 1847 had identically similar characters in both Edinburgh and Dublin, and as none of my seniors in the profession have written on it, I think no apology is necessary for my doing so. My observations will be entirely confined to such cases as I saw and had charge of in the hospitals.

The character of the Epidemic fever was peculiar and quite distinct from Typhus ; this is particularly evident in the results of the two diseases. In the Epidemic fever, only two died out of 160 persons of whom I preserved daily notes, while in Typhus the mortality amounted to 9 in 90 cases. But the difference was as evident in the two diseases in their progress and symptoms. To prove this, I shall first sketch a case of Epidemic fever as it occurred to myself, and then in detail point out the very peculiar train of phenomena that marked it.

The seizure commenced suddenly on the 30th July, 1847, with an uncomfortable feeling of chilliness and shivering as I was walking at sun-set ; previous to this I had been in good health, perhaps a little more sensible of fatigue on slight exertions than I ought to have been ; that night I was restless, tossing in bed, and dreaming. Next morning my tongue was loaded with white fur, I had no appetite, and my pulse was quick ; about 11 a.m., I had another severe chilly shivering, my body becoming pale and icy cold ; this was followed by headache, aching of the bones, lumbar pain, and pulse 120. From this until the 9th day I was ill, my mind wandering and dreaming, but still with sufficient command of it to prevent my raving aloud ; the headache was severe and my head hot ; for this my hair was shaved, and cold affusions applied over my head, which gave

me great relief. On the 9th day I was seized with slight shiverings, followed by flushes of heat passing across my body; a most profuse sweat then broke out from every part of the surface, wetting the sheets as if they had been dipped in water; during this I fell into a profound sleep and awoke quite well. I rapidly recovered, was convalescent, and out of my room, when on the 4th day (13th of the attack,) towards evening, I did not feel so well as I had been, and next day was in full relapse. During the entire duration of this I slept none, and was much annoyed by the constant changing delirium of my ideas. My head and skin were burningly hot, my stomach frequently disturbed by vomiting, and on the two last days of the relapse I had great thirst and tenderness of the epigastrium. On the 5th day of the relapse (the 18th of the attack) I again had slight tremors followed by flushes of heat; at last perspiration broke forth more profusely than with the original fever, wetting all the clothes of the bed, I sank once more into a sound slumber and awoke in health; my recovery was very rapid, I was able to leave town in a week, and in a month my health was quite restored. My recovery was followed by desquamation of the entire cuticle of my body, and the mucous membrane of the bladder and kidneys must have been similarly affected, as quantities of epithelial scales loaded the secretions from the 4th to the 8th day after recovery.

Previous to my illness, the fact that numerous cases of fever had recovered about the 9th day, to relapse and undergo another attack of fever shorter than the last, had engaged my notice; but when I resumed the care of the fever wards, and found the same Epidemic type still prevailing, I was led to observe it with much more care. I found that those fevers usually commenced with severe symptoms, rigors, feelings of

general illness, and sometimes vomiting, and high fever soon established itself, compelling the patients early to seek hospital relief, while those who had Maculated Typhus usually remained with their friends until the 5th or 6th day of their illness, their symptoms gradually increasing in severity, and in many not exciting sufficient attention until their strength was suffering, and the eruption of Typhus maculæ about to appear.

The Epidemic fever was attended in many cases with an eruption of small blood spots ; these were often mistaken for flea bites ; the spots in some where few in number, not above a dozen or so, appearing scattered on the sides of the neck, front of chest, or upper part of the arms ; in others they were in much greater abundance, and occupied the chest generally, the neck, arms, legs, abdomen, eyelids, face and back, and they appeared on these parts somewhat in the order mentioned, as to frequency of locality. The spots varied in size from a mere point to that of a spangle, and I saw a few as large as a fourpenny piece, but none larger ; they were usually of a vivid scarlet colour, but in some were of a dark purple, almost black ; I saw none raised above the skin ; they all appeared to be on the surface of the cutis ; if large, they often became surrounded by ecchymosed zones as they faded gradually away, but in numerous cases they certainly disappeared suddenly during crisis. Many who had this Epidemic fever had no eruption, and I remarked that those above the lower grades escaped it altogether.

Many were brought into hospital jaundiced ; some deeply and some very lightly, the hue varying from a pale, sallow, unhealthy colour, to the deepest jaundice of a

dusky orange brown. I am acquainted with three cases in which the sudden appearance of this jaundice was attended with coma, terminating fatally. Two of these are the two fatal cases that occurred under my care; this jaundicing was usually met with during the primary attack, but some had it also in the relapse. I may mention that there was a very peculiar odour from the bodies of almost every patient, and this was particularly manifest during the sweating stage.

The bowels were usually deranged and constipated for a few days before the attack commenced; afterwards they became regular, but in the interval between primary recovery and relapse, they usually became again constipated, so that the patients frequently asked for aperients at this time, and it was observed that on their operating, shiverings would commence, and the relapse at once establish itself.

Headache was severely felt by many, in others it was little minded after the first day or so, and complained of rather as heaviness of the head or giddiness, than actual pain; but in the commencement of the fever or relapse, the headache was often severe, with great heat of head and throbbing of the temples. The delirium was peculiar, it was rather an active dreaming in which the persons affected seemed to themselves to take a part in the subject of the delirium, and neither raved loudly, nor attempted to leave their beds. Two brewers' porters alone had active delirium preceding crisis, getting out of their beds and talking loudly of their business; but usually patients were perfectly conscious of their delirious thoughts and concealed them. The heat of the body was increased, but was

not usually very high ; in some, for a few hours before the sweating stage, the skin was as hot and pungent and felt as disagreeable to the hand as in scarlatina or pneumonia.

The tongue was, in many, loaded with a moist white fur like chalk, and marked at the edges with the teeth ; in others, a dry dark brown streak occupied its middle part from the tip backwards, the edges remaining moist, or the whole tongue was brownish and dry ; in others, the morbidly red tongue of gastric irritation with its enlarged papillæ was present. All had tenderness of the epigastrium who had jaundice, and many who had it not ; it was a very common occurrence, its seat varied from behind the zyphoid appendix to the umbilicus, and in most it was chiefly felt midway between those points. Some few had tenderness of the region of the liver, and some felt the spleen sore when pressed upon ; a few also had tenderness of the hypogastrium ; this occurred chiefly in June and July, 1847, when enteric complications were common. Vomiting was frequently an early symptom ; it also was met occasionally towards the end of the disease, before the sweating set in, and in some was very distressing.

The pulse after the incipient stage, varied from 100 to 130 beats in a minute, was tolerably full, but compressible, and evidently not such as to require depletion by the lancet in any case. In the end of October and November it was particularly observed that the pulse in the interval between the end of the primary fever and the relapse, used to fall as low as 60, 50, and even 44 beats in a minute, the pulse rising very slowly under the finger at each beat ; it usually fell at other times to between 60 and 72 ; it again rose on relapse to from 98 to 120, and on recovery sank to about 72.

The relapse was a peculiar feature of the Epidemic disease. The primary fever after lasting from seven to nine days came to an end, a period of four days now ensued of perfect health to all appearance ; in some this was exactly doubled, and eight days passed before relapse began ; in one case I believe it was trebled, and twelve days passed away, then the fever would return, in most cases more severely than at first, to last for four days, and then to end like the primary fever by a manifest crisis. This periodic character was so marked that with the aid of the previous history we were often enabled to calculate its future progress. Recovery usually took place by a well-marked crisis of sweating, both in the original fever and relapse ; in some, recovery was preceded by a smart attack of diarrhoea, and in females the menstrual discharge occasionally took the place of the perspirations. I could trace no other form of crisis, and but very few recovered gradually. Lateritious deposits were very rare in the urine. I saw only one case where there was a pink deposit of urate of ammonia, it occurred in both the fever and relapse ; in this girl there was some jaundice, hepatic tenderness, and gastric disturbance. The sweating usually lasted from half an hour to four or five hours, and in a few even for a longer period ; it was often so profuse as to cause the sheets and two or three night-shirts to be as wet as if dipped in water ; they usually fell into a sound sleep while perspiring. In many an eruption of sudamina appeared with the sweating, and when they were visible after the perspiring in the original fever they also accompanied the sweating of the relapse ; they were often present only on the front of the body, the back being quite free from them, and were sometimes very thick on the abdomen, appearing there alone ; in some they

also occupied the chest, thighs, neck and arms; the spots varied in size from a millet-seed to a split pea; in a few, fresh crops of these vesicles would appear on successive nights for two or three turns.

The Spleen was in many cases distinctly felt enlarged during life, and in the fatal cases, after death, was found of enormous size and gorged with blood, in one case weighing 1lb 4oz., in another, 1lb. 8oz., and in a third, 3½lb.; the two latter are the weights of the spleen of the patients that died of jaundice and comatose; but in numerous cases that recovered, the increase of the spleen could be readily traced by percussion, and in many I felt it through the anterior parietes of the abdomen. In a few cases I could perceive it becoming smaller and regaining its natural size at the end of the primary fever, again swelling on relapse, and again diminishing on perfect recovery. In the Meath Hospital, under Dr. Lees, numerous cases of this fever occurred, in which this enlargement of the spleen was distinctly observed.

The Relapsing or Epidemic Fever was totally different from true maculated Typhns Fever, which also prevailed to a great extent, and towards the spring of 1848 altogether supplanted the less dangerous form of Epidemic fever. The Epidemic was marked by displaying violent symptoms at its very commencement, and by the abrupt transition from comparative health to disease, which caused such evident distress that the patients were at once obliged to seek relief, whilst, I believe in the majority of Typhns cases this is far less felt, and the patient endeavours to battle against his illness, keeping up and even trying to work, in too many instances, until the first few days have passed. Again, it

differed from Typhus in its tendency to end on the 7th and 9th days. I am not aware of an instance in which this did not happen, while Typhus usually ran on until the 15th day, or even longer. The Epidemic commonly terminated by perspiration of a profuse amount, while I only saw one case during the same period in which sweating occurred in Typhus as a termination to that disease. The absence of the true maculæ of Typhus in every case of the Epidemic fever was also very distinctive of the difference of the two fevers.

Asto the occurrence of purpuric spots, I am disposed to regard them rather as an accidental occurrence than as distinctive of this Epidemic relapsing fever, and due to the operation of causes which were felt by the entire population, but especially fell on the lower orders, I mean the deprivation of fresh vegetable food in sufficient quantity, and in some cases its total disuse ; this, as is well known, produced a recurrence of scurvy among the people, an affection so little known for years previously, that it was not recognized on its reappearance by many intimately acquainted with the diseases usually seen among the poor. During the same period a great increase was visible in the number of those attacked with ordinary Purpura Hæmorrhagica and hæmorrhagic discharges of every kind. The absence of the eruption of blood spots in many attacked with the Epidemic fever will be a proof of its non-essential character, and its not occurring in those removed above the classes of society by whom the famine was chiefly felt, and also its amount bearing a direct relation to the previous want of vegetable diet, a fact which I ascertained as far as possible by careful inquiry, will shew its occurrence to have been due to the want of sufficient vegetable food. It is known that this undoubtedly predisposes to purpura, and when a febrile disturbance

arises in the system of one thus circumstanced, the already disordered fluids of the body becoming more distempered, an eruption of blood spots of such a character as did occur was to be looked for. The disappearance of the spots after a crisis is also easily understood; a quantity of water being drained from the system, very probably loaded with morbid matters, as its peculiar odour seems to shew us, must have left the blood in a more healthy state, and the vigour of constitution which follows fevers, joined to the good diet of an hospital, are capable of producing such a change in the condition of the poorer patients, as would explain their continuing free from a fresh attack of purpura on their recovery from the epidemic disease. I may also mention that the cases attended with blood spots diminished in frequency as the spring of 1848 advanced.

In connexion with this, it may also be interesting to notice, that, at the period at which this blood eruption prevailed, in those cases of Typhus fever that occurred, the eruption of Typhus maculæ was found to be very dark, and to last a long time, in some up to the 21st day. Now, from careful observation I was satisfied that Typhus was closely allied to the class of exanthematous diseases. This has been well proved by Dr. Hudson, of Navan, to be a fact, and I do not advance it as anything new or strange; but as a proof of the accuracy of his views, I may say, that of the many Typhus cases of which I had care, I never observed one in which the eruption did not appear at a definite time, the 7th day, although more than one was shown to me in which its earlier appearance was asserted; but on inquiry I invariably found that from one to three days were spent in a state of disease by the patient before he was so ill as to take to his bed, and that the true

commencement of Typhus ought, therefore, to be dated back so much longer, which would cause the appearance of the eruption always to fall on the 7th day. (A very few cases of Gastro-Enterite fell under my notice ; as for the laws of the eruption of this disease I cannot say anything, as I saw too few of them, but I have no doubt that observation will enable it to be distinguished from the maculæ of Typhus, which the eruption of Gastro-Enterite resembles in some points, but from which it differs in the period of its occurrence and its duration.) Now, in true Typhus, the persistence of the eruption appeared so unlike what occurs in other exanthems, that I was anxious to try why it happened, and was fortunate enough to obtain what seems to be a satisfactory solution. The spots really disappear on the 3rd day after their coming out (the 10th day of Typhus,) in ordinary cases ; but in many, during the haemorrhagic tendency of disease in 1847, at the end of this time, the little vessels which form the stigmata, instead of disappearing, permitted extravasation of blood to occur through their coats, and formed true spots of Purpura Haemorrhagica. This I observed with the aid of magnifying glasses actually to occur, and to further prove the truth of it, I applied to the spots, while they were yet without extravasation, dry exhausted cupping glasses, and readily changed the maculæ into purpura, which then lasted far beyond the proper duration of the maculæ. Dr. Banks also observed these facts with me, and he has a drawing of purpuric spots produced in this manner, and taken from a Typhus patient. I have no doubt that in every case in which the maculæ of Typhus remain longer visible than three days, and thus transgress the invariable laws of other exanthems, that the true explanation lies in

their conversion into purpura from extravasation of blood in each spot or stigma of the maculæ.

After this digression I shall return to the history of the Epidemic fever, and would point particularly to the period intervening between the primary fever and relapse ; in the majority this was four days, in some this was exactly doubled, and on the eighth day relapse occurred, to last four days more, half the time of the primary fever, and then health ensued. In connexion with this remission I would point to the peculiar enlargement of the spleen, and without offering any explanation of the fact, merely allude to the connexion which exists between Ague, another periodic disease, and enlarged spleen. Can it be that the Epidemic, like Ague, owed its origin to terrestrial miasms ?

As to Treatment I shall say very little, as the fever seems to have disappeared from Dublin ; wine was rarely required, and was by some disliked ; depletion was called for still less frequently. I bled only one man, he fainted with the removal of six ounces of blood. The headache was relieved by cold affusion, blisters to the nape, and very rarely leeches to the temples. The spontaneous occurrence of sweating ending in health, pointed out the impropriety of interfering with it by over active treatment. The tenderness of the epigastrium was met by small blisters and sinapisms ; the latter often produced haemorrhagic eruptions on the parts they were placed upon, such as I never observed at other times, perfect patches of extravasation marking for days after, the size and place of the sinapisms, and looking as if the patient had been painted with blood. These marks were not confined to cases of Epidemic fever, but they occurred in other diseases, while the Epidemic fever

prevailed. The first time I noticed them was in a man dying of effusion on the brain, as a termination of cirrhosis of the liver and extensive ascites, and other instances rapidly following, in both the fever and chronic medical hospitals, caused them to be more attentively observed.

In the Epidemic the occurrence of relapse appeared unavoidable under every mode of treatment; with or without medicines, on full or low diet, in bed or out of it, they had relapse.

